

Counter-drone tech and state-of-the-art radar for the RAF

The new contract will secure over 600 jobs and make sure the UK remains at the forefront of radar technology development.

The RAF is also one step closer in bringing its ORCUS technology into force, which can jam radio signals from drones and has already been successfully deployed during drone sightings at airports.

Confirming the news at the Defence Procurement, Research, Technology & Exportability (DPRTE) 2020 event, the Minister, said:

It is vital that our Armed Forces are equipped with the latest technology to counter emerging threats from our adversaries.

Today we announce the investment in the latest in radar technology for our fighter jets and pioneering new defence systems to counter threats from drones. This demonstrates our commitment to maintaining security in the air whilst supporting highly-skilled jobs across the UK.

Typhoon radar

The new Typhoon radar investment will ensure the aircraft are equipped with world-class technology. Crown copyright.

Typhoon aircraft will be equipped with next-generation radar thanks to £317 million investment that will allow it to locate, identify and suppress enemy air defences using high-powered jamming.

The integration of the new European Common Radar System (ECRS) Mk2, which is based on Active Electronically Scanned Array (AESA) technology, will provide a capability edge in the increasingly contested battlespace.

Currently fitted with mechanically-scanning radar, the Typhoon is designed to be continuously upgraded to meet operational demand no matter the challenge or threat. The ECRS Mk2 will allow the aircraft to simultaneously detect, identify and track multiple targets in the air and on the ground in the most challenging environments.

Planned to be in service by the mid-2020s, the radar development programme will sustain hundreds of highly skilled jobs, including more than 300 at Leonardo's Edinburgh site and 100 at their Luton site; 120 at BAE Systems' site in Lancashire and 100 at their site in Dunfermline, Fife; and 50 at sub-contractor Meggitt in Stevenage.

Counter-drone technology

ORCUS counter-drone technology is part of the RAF's SYNERGIA research and development programme. Crown copyright.

The Royal Air Force's SYNERGIA counter-drone research and development programme has reached a significant milestone with the ORCUS counter-drone capability achieving initial operating capability (IOC). IOC was achieved after ORCUS completed successful testing of a full range of integrated detect, track, ID, and defeat technologies.

Vital to protecting UK air bases from hostile drone activity, ORCUS will enable the RAF to evaluate a range of capabilities including advanced radar, electro-optic and radio frequency sensors, plus an electronic attack countermeasure. The device looks similar to a camera module placed on top of a tripod, allowing for unparalleled versatility in operations.

The technology is part of the RAF's Counter-Unmanned Aerial System (C-UAS) research and development programme with Leonardo to establish the most effective way to detect, track, identify and defeat hostile drones.

Elements of Leonardo's C-UAS equipment played a supporting role in RAF Force Protection in 2018 and 2019, following drone sightings at Gatwick and Heathrow airports, allowing airport operations to resume.

The current phase of the programme, which started in 2019, supports more than 50 highly skilled jobs with over 20 at Leonardo, with the primary integration work undertaken at its Basildon and Southampton sites and real-time testing taking place at several MOD locations within the UK.